

**REMARKS**

Claims 13, 14 and 16 stand rejected under 35 U.S.C. 102(b) as being anticipated by Arndt (U.S. Patent No. 5,204,917). Claim 20 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Pluvinae et al. (U.S. Patent No. 5,987,146). Claims 1-7, 9-12, 17-19, 21-25 and 27-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pluvinae in view of the present specification and further in view of Ward (U.S. Patent No. 5,201,007). Claim 26 stands rejected under 35 U.S.C. 102(b) as being anticipated by Pluvinae in view of Harada (U.S. Patent No. 3,934,100). The Examiner has noted that claim 8 and 15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Rejection of Claims 13, 14 and 16 Under 35 U.S.C. 102(b) – Arndt cited**

Claims 13, 14 and 16 stand rejected under 35 U.S.C. 102(b) as being anticipated by Arndt.

Claim 13 has been amended to clarify the distinctions between it and Arndt. The amendments to claim 13 are supported by the specification (see, for example, page 11, lines 3-5; page 11, lines 25-28 and Fig. 1). These distinctions include a hearing aid tube adapted to be inserted in the user's ear canal and a key/keyway arranged to maintain a specific orientation between the case body and the hearing aid tube. Arndt does not teach or disclose a hearing aid tube adapted to be inserted in the user's ear canal. With respect to the key/keyway of the present invention, Arndt does not teach or disclose such elements. The Office Action equates the threads 80 to a key. Applicants note that threads do not maintain a specific orientation of the mated components as presently claimed. Rather, the orientation of two components threaded together depends upon how tightly the two components are screwed together, i.e., if loosely screwed together the components will maintain a first orientation, if tightly screwed together the components will maintain a second orientation, and there is a continuum of possible orientations between the first and second orientations. In marked contrast, a key and keyway system limits the orientation of the two mated components to a single (i.e., specific) orientation. Furthermore, the present limitations require the key to be substantially parallel to the longitudinal axis of the

nipple, another limitation not met by the threads of portion 80. Accordingly, Applicants request the withdrawal of the rejection under 35 U.S.C. 102(b) of claim 13.

Claim 14 has been amended to clarify the distinctions between it and Arndt. The amendments to claim 14 are supported by the specification (see, for example, page 11, lines 8-9; page 11, lines 24-25; and Figs. 1 and 6). These distinctions include a hearing aid tube adapted to be inserted in the user's ear canal, an annular retention ring on the nipple extending from the attachment surface on the case, and a recess on an internal surface of the hearing aid tube where the annular retention ring and the recess operate cooperatively to form a snap fit. Arndt does not teach or disclose a hearing aid tube adapted to be inserted in the user's ear canal. With respect to the annular retention ring/recess of the present invention, Arndt does not teach or disclose such elements. The Office Action notes that the end of 12 includes a circumferential ring. To further clarify the differences, claim 14 has been amended to claim an annular retention ring on the nipple extending from the attachment surface of the case and a recess on an internal surface of the hearing aid tube, the two elements operating cooperatively to retain the hearing aid tube in a snap fit. Arndt teaches holding these two components together using threaded portion 80. The differences between these two fabrication techniques are obvious. For example, as opposed to taking the effort to screw the two components together as taught by Arndt, the presently claimed components can simply be snapped together. Furthermore, while snap fit components are free to turn 360 degrees around the nipple (unless located in a specific orientation by a key/keyway, set screw, bonding agent or other means), threaded components are limited by the threads and the mating surfaces. In light of the differences between the claimed invention and Arndt, Applicants respectfully request the withdrawal of the rejection of claim 13 under 35 U.S.C. 102(b).

As claim 16 has been canceled, this rejection is moot.

Rejection of Claim 20 Under 35 U.S.C. 103(a) – Pluinage cited

Claim 20 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Pluinage et al. Claim 20 has been amended to further clarify the distinctions between it and the cited art. Support for these amendments can be found, for example, at page 14, lines 1-4; page 16, line 19 – page 17, line 2; and Fig. 14. The Office Action notes that it would have been obvious to use a tool, such as pliers, to assemble the small tube and eartip as suggested at col. 4,

lines 43-53 of Pluinage. Applicants note that the Pluinage reference only notes that the ear tub can be quite small, not that a specialized tool would aid in the assembly of the hearing aid. Furthermore, none of the cited references suggest an insertion tool as presently claimed. Applicants respectfully submit that while it would have been obvious to use pliers and other routinely available tools, it would not have been obvious to use an insertion tool as presently claimed. Accordingly, Applicants request the withdrawal of the rejection under 35 U.S.C. 103(a) of claim 20.

Rejection of Claims 1-7, 9-12, 17-19, 21-25 and 27-32 Under 35 U.S.C. 103(a) – Pluinage in view of specification and Ward

Claims 1-7, 9-12, 17-19, 21-25 and 27-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pluinage in view of the present specification and further in view of Ward. Claim 1 has been amended, replacing the somewhat awkward wording with more straightforward wording.

The Office Action notes that the specification teaches that tubing made of PVC is sufficiently rigid such that a 1 inch segment would not be deflected by a force of 1 g or less. Applicants strongly disagree. Fig. 31 and accompanying text page 10, lines 14-20 shows that a 1 inch segment of PVC would be deflected by a force of 1 g or less. Specifically, the figure shows that the force required to make such a deflection is between approximately 0.5 and 0.75 grams. Ward, as noted by the Examiner, teaches formulating the tubing from PVC and similar materials. However, as noted in the present specification, such tubing does not provide sufficient rigidity. Accordingly, the combination of Ward and Pluinage actually teach away from the present invention.

The present specification states:

The relative rigidity of the tube 12 allows the tube to apply a torque to the eartip 14 to maintain the eartip in a position in which the eartip is pressed against an anatomical feature within the ear canal. This ability to apply a torque to the eartip 14 with the tube 12 provides a substantial improvement over flexible tubing used in known BTE hearing aids in which the ear mold must fix the end of the tube in the ear and the tube

provides no retention or support of the hearing aid device. (Page 10, lines 2-7, emphasis added).

Thus the present specification notes that the rigidity of the present earpiece is a significant improvement offered by the invention that allows the eartip to maintain the desired position.

With respect to the rigidity, the specification states that the prior art tube was formed of PVC (page 10, lines 11-12) and that the “force required to bend a one inch (2.54 cm) piece of the standard PVC flexible tubing 0.1 inch (2.54 mm) is lower than the force required to bend the more rigid tubing of the present invention” (page 10, lines 16-17). The specification goes on to state that the force required to deflect the hearing tube of the invention is 2-3 times higher than that required to deflect the standard hearing aid tube.

Nothing in the cited prior art teaches or suggests increasing the rigidity of the tubing such that a 1 inch segment of the tube is deflected by less than 0.1 inches by a force of 1 g. Therefore independent claims 1, 9, 12, 17 and 21 are novel and patentable over the cited art. Accordingly, Applicants request the withdrawal of the rejection under 35 U.S.C. 103(a) of independent claims 1, 9, 12, 17 and 21 as well as those claims that depend therefrom (i.e., claims 2-7, 10-11, 18-19, 22-25 and 27-32).

Rejection of Claim 26 Under 35 U.S.C. 102(b) – Pluvinage in view of Harada

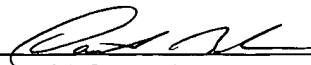
Claim 26 stands rejected under 35 U.S.C. 102(b) as being anticipated by Pluvinage in view of Harada. As claim 26 depends from claim 25 which depends from claim 21, and as claim 21 is believed to be patentable over the cited art for the reasons provided above, Applicants respectfully submit that claim 26 is in allowable condition and request the withdrawal of the rejection under 35 U.S.C. 102(b) of claim 26.

Noted Allowability of Claims 8 and 15

The Examiner has noted that claim 8 and 15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As the claims from which these claims depend are believed to be in allowable condition as noted above, Applicants have not amended the claims as suggested by the Office Action.

If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned at (415) 393-2404.

DATE: 12/12/03 Respectfully submitted,

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